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NOTES ON THE VARYING HARES OF WASHINGTON AND BRITISH COLUMBIA WITH DESCRIPTION OF A NEW SUB-SPECIES.

BY SAMUEL N. RHOADS.

In the determination of the relationships of the Varying Hare, *Lepus americanus*, of interior British Columbia it became necessary to handle a larger number of specimens of this group from west of the Rocky Mountains than has hitherto been available for study. This material includes typical specimens of *L. washingtoni* from near Puget Sound, four winter skins and ten skulls from near the Suquamie Pass, Washington, and four skins and six skulls from Hope, B. C., kindly loaned me by Mr. Outram Bangs. It is to be regretted that summer specimens of the Cascade Mountain form from Washington were not available as it is impossible to establish their relations to typical *washingtoni* in any other way. On this account these notes may be considered as merely preliminary to a more thorough investigation of material now being collected in these regions.

A comparison of a large series of skulls from the Cascades and lowlands of Washington convinces me that *washingtoni* is specifically distinct from *americanus* and it is probable that the form of *washingtoni* found in the higher Cascades is a well-marked race. The cranial characters, taken from average adult skulls from Maine and Puget Sound, which separate *americanus* and *washingtoni*, may be thus stated.

L. americanus

Postorbital processes wide, and flaring their internal posterior margins curved outwardly, their points directed outwardly and widely separated from frontal bones. Supraorbital processes of frontals strongly developed into a spur directed outwardly forward and forming, with the postorbital process—an anvil-shaped promontory on each side the frontals.

Incisive foramina, together forming a regular isosceles triangle the double crenate base being

L. washingtoni

Postorbital processes slender, the posterior margins straight or incurved, their points directed within the lateral sutures of the frontals, and in older specimens nearly touching them. Supraorbital margins of frontals serrate, sometimes with a single rounded notch.

Incisive foramina jointly forming a hastate figure with rounded apex and basally narrower than at its median diameter. Greatest triturating width of molars 4.2 mm; basilar length of skull

L. americanus.

the widest part of their expansion, and the apex acutely pointed. Greatest triturating width of molars 5 mm; basilar length of skull 58; zygomatic width 37; greatest outer distance between alveolar walls of right and left maxillaries 24.5.

L. washingtoni.

56; zygomatic width 37; greatest distance between outer alveoli of right and left maxillaries 20.7.

It will be seen that the molar and incisor dentition of *washingtoni* is relatively much weaker than in skulls of *americanus* of the same size, with a corresponding narrowing of the palatal and rostral area and a corresponding change in the shape of the incisive foramina, the constancy of which, coupled with the peculiarity of the frontal process, is to my mind quite sufficient for a specific separation of the Pacific and Atlantic coast representatives of this group.

The following diagnosis is of a hare whose cranial characters are distinctly the same as those of skulls of *americanus* from Maine:

Lepus americanus columbiensis sub sp. nov. Type, ad ♀, No. 462, Col. of S. N. Rhoads, Vernon, B. Columbia. Col. by S. N. Rhoads, July 29, 1892

Description. Size of average *L. americanus*. Summer pelage, above, light tawny gray, blackish on rump, tail and anterior border terminal of ears; anterior base of ears, crown, cheeks, upper fore leg sides of hams and upper surfaces of feet light rusty, soles of feet sooty. Inner fore and hind legs, lower head, lips, breast, fore part of abdomen and spot in forehead, white. Lower neck like back. Lower abdomen and tail bluish gray, suffused with rusty. Fur of back with basal half plumbeous, median fourth light rusty, terminal fourth black, a few of the hairs wholly black and many with minute black tip, and proportionally wider rusty median zone.

Measurements. Total length 465 mm.; tail vertebræ 43; hind foot 140; ear (inner anterior border of dry skin), 72. Skull; total length (occipito-nasal), 79; basilar length, 62; length of nasals, 32.5; posterior interorbital constriction, 10.2; zygomatic expansion, 38; greatest length of mandible, 58; greatest width of same, 35.5.

This strongly marked race of the Varying Hare is represented by the type and another adult female taken by me in June on the Caribou Road, between Ashcroft and Clinton, B. C. It represents the faunal peculiarities of the arid interior basin of southern British Columbia, and may at once be distinguished from any of the vari-

ations of *americanus* east of the Rocky Mountains by its grayness and almost total lack of rufous above. From the Rocky Mountain and east Cascade form which, for present purposes, may be called *bairdi*, the color of the feet is a distinguishing character, while, as compared with *washingtoni*, the differences in color and size are obvious enough to need no comment.